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Proposal for the seismic mitigation retrofit and life-cycle replacements project at the Economic and Social Commission for Asia and the Pacific premises in Bangkok

Report of the Advisory Committee on Administrative and Budgetary Questions

I. Introduction

1. The Advisory Committee on Administrative and Budgetary Questions has considered the report of the Secretary-General on the proposal for the seismic mitigation retrofit and life-cycle replacements project at the Economic and Social Commission for Asia and the Pacific (ESCAP) premises in Bangkok (A/71/333 and Corr.1). During its consideration of the report, the Committee met with representatives of the Secretary-General, who provided additional information and clarification, concluding with written responses dated 13 October 2016.

2. The report of the Secretary-General is submitted pursuant to General Assembly resolution 70/248 A, in which the Assembly requested the Secretary-General to submit to the Assembly at the main part of its seventy-first session an updated proposal on the project and costing estimates for multiphase and single-phase implementation methods, including an option to address the seismic risk on its own and an option in combination with renovation, life-cycle replacement or other works, ensuring the most cost-effective and efficient method of implementation.

II. Seismic risk and existing conditions of buildings at the Economic and Social Commission for Asia and the Pacific premises at Bangkok

3. The report of the Secretary-General states that both the secretariat and service buildings of ESCAP were built in the early 1970s and do not conform to current

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Thai seismic codes. It also states that the overarching objective of the project is to comply with seismic and other fire and life-safety codes for the premises, although the project also provides opportunities for the most cost-effective method to address other long-term benefits related to building performance, energy conservation, space usage and the life-cycle replacement of building systems that will be at or beyond their useful lives by 2025 (see A/71/333, paras. 5 to 7 and 30).

4. With respect to the seismic risk, the report indicates that the peak ground acceleration for ESCAP is classified as having a moderate potential to cause damage to resistant structures, and a moderate to heavy potential to cause damage to vulnerable structures. Coupled with the particular soil and bedrock characteristics of the Bangkok area, which could magnify the seismic forces and make the threat significant, seismic activity could cause severe damage to or even complete collapse of structures, such as the secretariat building. The report states that a seismic evaluation report in 2014 found that seismic mitigation measures would be necessary for both the secretariat and service buildings to ensure compliance with the current design standards for seismic resistance that are considered necessary for the safety of their users. That analysis was confirmed in another study conducted in 2016 (see A/71/333, paras. 9 to 11 and 19 to 21). Upon enquiry, the Advisory Committee was informed that, during the past 10 years, more than 80 significant earthquakes had impacted Thailand; half of those had occurred during the past three years, which indicated an increasing frequency in seismic activity. The Committee was further informed that an analysis of seismic activity from 1912 to 2007 showed that several earthquakes measuring higher than 6.0 on the Richter scale were located fewer than 200 km from Bangkok.

5. With regard to hazardous materials, the report states that an assessment conducted in 2016 indicates a minimal presence of asbestos-containing materials confined to the lower basements, with restricted access, and is therefore not considered a major health risk at present, although the retrofit would address that issue. The report also indicates that life-cycle replacement works would be required, including the exterior marble cladding of the secretariat building and the glazing systems of both the secretariat and service buildings (see A/71/333, paras. 24, 26 and 27).

6. General Assembly resolution 70/248 A requested the Secretary-General to provide specific information about possible measures to be taken to eliminate physical, communications or technical barriers to persons with disabilities at ESCAP, while ensuring compliance with the Convention on the Rights of Persons with Disabilities. The Secretary-General indicates that a comprehensive review would be conducted during project planning (phase 2) in 2017, which would address physical, sight, hearing and cognitive disabilities, with the goal of all-access design, signage, access aids, doors, furniture and office layouts, controls (namely lighting area control) and fire egress (see A/71/333, para. 25). **The Advisory Committee trusts that the results of the comprehensive review will be factored into all stages of the project to facilitate access to the premises and participation in meetings and other activities by persons with disabilities.**

7. **The Advisory Committee notes the importance of addressing the seismic threat at ESCAP premises for the health and safety of users of the buildings. The Committee also notes that life-cycle replacement works would be required**

for the secretariat and service buildings, which were built in the early 1970s and are nearing the end of their useful lives.

III. Proposed options of the Secretary-General

8. Paragraph 49 of the report sets out the objectives of the proposed project at ESCAP, including maintaining the property value of United Nations premises, especially as it relates to building life-cycle replacement, and meeting industry norms related to health and safety issues and facilities preparedness.

9. The Secretary-General proposes four options for the proposed project (under all four options, the pre-construction phase would take place in 2017 and 2018 and comprise planning, design and tender, and construction would take place from 2019 onward):

(a) Option A, amounting to $37.77 million, would address seismic and associated costs only, in one phase over four years. The project would comprise one cycle of works with a duration of two years (2019-2020) requiring the emptying of the entire secretariat building. Under that option, no space redesign would be undertaken and therefore there would be no benefit of space efficiency;

(b) Option B, amounting to $23.70 million, would address seismic and associated costs only, with a phased implementation over five years. The project would comprise four cycles of work with a duration of nine months each, with total construction lasting three years (2019-2021). Each cycle would require emptying four floors of the secretariat building at a time. Under that option, no space redesign would be undertaken and therefore there would be no benefit of space efficiency;

(c) Option C, amounting to $40.02 million, would entail combined seismic and associated costs and life-cycle replacement components, with a phased implementation over six years. The construction phase would comprise four cycles of work with a duration of 12 months each and would last four years (2019-2022). Each cycle would require emptying four floors of the secretariat building at a time. The option would include a complete redesign of office layouts to achieve space efficiencies;

(d) Option D, amounting to $40.84 million, would entail combined seismic and associated costs and life-cycle replacement components, with a phased implementation over eight years. The option envisages eight cycles of work with a duration of nine months each, with total construction lasting six years (2019-2024). Each cycle would require emptying two floors of the secretariat building at a time. The option would include a complete redesign of office layouts to achieve space efficiencies (see A/71/333, para. 51 and table 4).

10. Paragraphs 61 to 71 of the report provide information on the cost-benefit analysis and the risk assessment of the four options. According to the Secretary-General, implementing option A would put ESCAP at the highest risk in relation to business continuity and would incur the highest cumulative loss in rental income from tenants, estimated at $890,000. The report states that option C would have the lowest risk score.

11. The Secretary-General recommends option C, which he considers to be the most cost-effective solution with the lowest risk score. The report also states that option C would provide benefits for ESCAP operations including a 16 to 18 per cent enhancement of energy efficiency, improvement in space efficiency of 20 per cent and a $540,000 projected annual increase in rental income (see A/71/333, para. 72). Upon enquiry, the Advisory Committee was informed that performing the seismic mitigation retrofit in parallel with the life-cycle replacements would avoid the duplication of fixed costs such as overhead, mobilization and safety measures for the construction phase, and project management and swing space costs. The Committee was further informed that should option C be approved, the renovated buildings would have an expected useful life of an additional 50 years from the time of completion.

12. **The Advisory Committee commends the Secretary-General on an improved report and welcomes the fact that different options have been presented for consideration. Having considered the four options, the Committee is of the view that it would be more cost-effective to undertake the seismic and life-cycle replacement works simultaneously, and therefore recommends against options A and B. Noting that option D would take two years longer than option C, and incur a higher cost, the Committee recommends option C as the most viable option for the seismic mitigation retrofit and life-cycle replacements project at ESCAP, subject to its recommendations and observations below on the related cost estimates.**

IV. Project cost estimates

13. Table 4 of the report sets out the cost estimates for the proposed project. Upon enquiry, the Advisory Committee was provided with a detailed breakdown of the project costs under option C in the amount of $40.02 million (see annex).

Escalation and contingency estimates

14. The report indicates that allowance for escalation has been added to the construction costs and consultancy estimates, at a rate of 4 per cent per annum, based on a forward projection of published data on recent past escalation rates, and based on the advice of a specialist cost consultant. The baseline for the estimate is July 2016, and the estimated escalation is compounded and applied to the annual expenditure projections. The report also indicates that the contingency provision was developed on the basis of a traditional percentage method, taking into consideration past experience with similar projects and other variables that may have an impact on the accuracy of the project cost estimates. For planning purposes, a contingency provision of 10 per cent of the estimated construction cost of the project, inclusive of consultancy fees, has been included (see A/71/333, paras. 55 and 56).

15. Upon enquiry, the Advisory Committee was informed that, while the contingency is not yet specific in regard to identified risks, the independent risk-management firm would analyse identified project risks by estimating their likelihood of occurrence and determining their impact costs, as well as the costs for management responses. The Committee was also informed that contingency

allowances would only be granted to resolve project uncertainties and to fill possible gaps with regard to the delivery of the established project scope; contingency allowances would not be used to finance any increase in scope unless otherwise approved by the General Assembly. The Committee was also informed that clear mechanisms, procedures and controls would be established to utilize the funds, and that it was not the intent of the Secretary-General to spend all of the contingency provisions, but rather to execute the project as much as possible within the approved budgetary resources, excluding contingency provisions.

16. The Advisory Committee has previously made recommendations and observations in relation to escalation and contingency estimates in construction project proposals (see A/70/7/Add.8, paras. 41 to 52, and A/70/7/Add.21, paras. 49 to 54). **The Committee reiterates that, in order to ensure transparency in reporting, the contingency and the escalation estimates should be presented separately from other project costs.**

17. **The Advisory Committee also reiterates that the risk analysis applied to a pre-determined contingency amount based on fixed percentages does not represent an actual risk-based estimation of the project contingency level. The Committee therefore recommends that the General Assembly request the Secretary-General to refine the estimation of project contingencies by basing it on the identification of risks associated with the different phases of the project, both foreseen and unforeseen, and to separate the estimated contingencies from the base project cost in the presentation of his next progress report.**

18. **In addition, the Advisory Committee reiterates that contingency estimates for each phase of project implementation should be clearly indicated so that the contingency estimates and their use, if necessary, remain transparent throughout the life of the project. The Committee is also of the view that a systematic approach to managing and reporting on the use of project contingency funds should be applied so that the unused project contingency amount from one phase of the project is not carried over to the next phase. The Committee therefore recommends that unused contingency amounts be determined and returned to Member States at the completion of each phase of the project.**

Swing space requirements

19. Table 2 of the report indicates that, for option C, 4,800 m^2 of swing space would be required. The report states that ESCAP has identified 1,200 m^2 of temporary swing space on site on the ESCAP premises, and the remaining space needs of 3,600 m^2 would be met by host country contributions and/or commercially leased space. The report also states that the host country has advised ESCAP of one swing space option of up to 3,200 m^2 at the Government Complex located approximately 30 km north of ESCAP (see A/71/333, paras. 14 and 44 and table 2). Upon enquiry, the Advisory Committee was informed that if the host country agreed to provide the swing space at no cost, the swing space costs could be reduced by $3.15 million, which is the amount currently factored in for off-site swing space (see annex). **The Advisory Committee welcomes the positive steps taken towards engaging with the host country, and encourages ESCAP to continue the discussions on cooperation with the host country, including on the provision of swing space.**

Energy and space efficiencies

20. According to the Secretary-General, a study to review the current layout of the space at ESCAP highlighted that, by applying the capital master plan guidelines, ESCAP could gain 20 per cent in space efficiency if a renovation of the interior office space were to be implemented. In addition, because the office space would be converted from enclosed to open offices, the new configuration would be well suited to adopt flexible workplace strategies to achieve additional efficiency. The report also indicates that, by improving the insulation and glazing at the secretariat building, improvement in energy efficiency may be achieved with combined energy savings in the range of 16 to 18 per cent, as compared with existing conditions (see A/71/333, paras. 35 to 39).

21. Upon enquiry, the Advisory Committee was informed of savings from potential energy efficiency in the amount of $84,615 per year, while the potential space efficiency of 20 per cent could provide an additional $540,000 in rental income, amounting to savings per year of $624,615. The Committee was further informed that the potential savings from energy and space efficiencies and future rental income had not been applied towards the costs of the project. **In line with its previous recommendations on other construction projects, the Advisory Committee considers that the General Assembly may wish to request the Secretary-General to reflect future rental income in his next report. The Committee is of the view that space and energy efficiencies should also be included in project planning.**

22. With respect to flexible workplace strategies, the Advisory Committee was informed upon enquiry that ESCAP could only assess and quantify the potential gain from flexible workplace efficiencies after a change management exercise at ESCAP and the workplace space requirements study expected to be completed by 2018. **As with space and energy efficiencies above, the Advisory Committee recommends that the General Assembly request the Secretary-General to include flexible workplace strategies and related efficiency gains in project planning, and to reflect that information in his next report.**

Voluntary contributions

23. In its resolution 70/248 A, the General Assembly encouraged the Secretary-General to seek voluntary contributions and to report thereon in the context of the next report. The report of the Secretary-General states that ESCAP solicited assistance and support for the project from Member States in the form of voluntary contributions, either in-kind by way of technical experts or sharing lessons learned, or other contributions such as loans. The report states that several Member States have responded to the request, with some showing interest in providing support for the project (see A/71/333, paras. 15 and 16). **The Advisory Committee encourages the Secretary-General to engage further with Member States to seek voluntary contributions for the project.**

24. **In the light of its observations and recommendations above, the Advisory Committee is not in a position at the present stage to recommend approval of the Secretary-General's proposed cost estimates for option C in the amount of $40.02 million. The Committee instead recommends that the General Assembly**

request the Secretary-General to provide an update of cost estimates for option C in his next report.

V. Project governance

25. The report states that the project owner would be the Executive Secretary of ESCAP, and the Director of the Division of Administration would be the Project Executive, responsible for managing the dedicated project management team, interacting with internal and external stakeholders and handling strategic issues requiring senior-level decision-making. Day-to-day project execution would be under the leadership of the dedicated Project Manager. A stakeholders committee would be established to provide the Executive Secretary with advice and guidance with respect to the operational aspects of the project, but would not be able to make changes that would affect the project scope, schedule or cost. The committee would be composed of representatives from ESCAP, other secretariat offices at ESCAP premises, external entities and the Office of Central Support Services at United Nations Headquarters in New York (see A/71/333, paras. 73 to 75).

26. The Secretary-General indicates that, since the programme requirements of the ESCAP project are relatively straightforward, he would not propose the establishment of an Advisory Board for the project (see A/71/333, para. 76). Upon enquiry, the Advisory Committee was informed that Advisory Boards had previously been established for projects in which the scope was partly related to conferencing and historic preservation, for which the input of Member States, as direct clients or end users of the works, was essential. The Committee was also informed that, since the ESCAP project entailed only the renovation of non-historic office space for staff, the input of Member States related to the heritage of the Organization and their own needs for the space was not required. As for the governance role of Advisory Boards, the Committee was informed upon enquiry that, with the newly established enhanced role of the Office of Central Support Services for oversight and independent risk management, there would be appropriate and adequate overall governance for the project.

27. With respect to the role of the Office of Central Support Services, the report states that the Office would provide overall project oversight, including by providing ESCAP with technical guidance and advice on the project, ensuring that the project complies with overall organizational objectives and sharing lessons learned from other capital projects. The Office would also have a lead role in providing independent risk-management services through a specialist risk-management firm for expert services and a quantitative risk assessment (A/71/333, paras. 78 and 79). The General Assembly, in its resolution 70/248 A, emphasized the importance of guidance, interaction and coordination between the Secretariat in New York and ESCAP, with clear reporting lines. **The Advisory Committee stresses the continued importance of close coordination between ESCAP and the Secretariat in New York, including the Office of Central Support Services, to ensure proper oversight and governance of the project.**

VI. Resource requirements

28. The report indicates that the project team would be led by the Project Manager (P-5) and would comprise one Project Engineer (P-4), one Civil and Structural Engineer (P-3) and one Project Administrative Assistant (Local level) starting from 1 January 2017, as well as one Building Mechanical-Electrical-Plumbing Engineer (National Officer), one Logistics and Coordination Officer (National Officer) and one Safety Project Officer (Local level) starting from 1 January 2019. The project support team would comprise one Procurement Officer (P-3) from January 2017 until the contract signature, and one Security Officer (Local level) and one Information Technology Assistant (Local level) for each of the swing space locations. According to the Secretary-General, as Option C may entail two off-site swing space locations, two Security Officers and two Information Technology Assistants may be required, depending on the swing space arrangements (see A/71/333, paras. 81 and 82; see also annex to the present document).

29. In addition, it is envisaged that 50 per cent of the cost of a Project Coordinator (P-4) would be required for the duration of the project. The position would be based in the Office of Central Support Services and equally cost-shared between ESCAP and the Economic Commission for Africa (A/71/333, para. 82). Upon enquiry, the Advisory Committee was informed that the Project Coordinator would provide professional support and advice to the Chief of the Overseas Properties Management Unit in the Office of Central Support Services to ensure an appropriate oversight framework for monitoring and controlling project implementation in compliance with Organizational rules and regulations, and in line with industry best practices and previous lessons learned. The Committee was also informed that the Project Coordinator would support contract management of the independent risk-management firm and provide input for the development of key governance documents. The Committee's observations and recommendations on the Project Coordinator position in respect of the Africa Hall project are contained in its related report (see A/71/571). **While the Advisory Committee recommends approval of the proposed Project Coordinator (P-4) position, the Committee considers that the next report of the Secretary-General should explain the impact on the cost-sharing arrangement in the event that one project is completed before the other.**

30. The report states that, as part of the project management team, consultants, contractors and suppliers would be required for the provision of seismic engineering, architectural and engineering design and construction management services, including seismic and structural retrofit engineering and specialized architectural consultancy services for evaluating the implementation of flexible workplace arrangements. The report states that those specialized services would be managed and coordinated by the lead architectural and engineering firm (see A/71/333, para. 84). **The Advisory Committee is of the view that, since flexible workplace arrangements have been implemented in the Organization, there would be in-house expertise to provide those services and consultants should not be required. The Committee therefore recommends against those consultancy services** (see para. 34 below).

31. An independent risk-management firm is proposed to support a risk-management framework for the development and use of a risk register and a risk-based approach to the establishment and management of the contingency provision. The firm would report directly to the Office of Central Support Services in order to provide an independent assessment on the course of the various project actions, provide expertise to the project, assist in identifying and mitigating any risks that may affect the successful delivery of the project and support informed decision-making (see A/71/333, paras. 85 and 86).

32. Paragraphs 89 to 93 of the report set out resource requirements for the biennium 2016-2017 for the project. For 2016, in its resolution 70/248 A, the General Assembly authorized the Secretary-General to enter into commitments in an amount not to exceed $400,000. The report states that expenditure as at 31 December 2016 is projected to be $396,200. Utilization of the commitment authority will be reported in the context of the first performance report of the programme budget for the biennium 2016-2017.

33. For 2017, the Secretary-General requests the amount of $877,400, comprising $505,600 under section 19, Economic and social development in Asia and the Pacific, and $371,800 under section 33, Construction, alteration, improvement and major maintenance. Under section 19, Economic and social development in Asia and the Pacific, the amount of $505,600, under other staff costs, would provide for project management and support functions, comprising one Project Manager (P-5), one Project Engineer (P-4), one Civil and Structural Engineer (P-3), one Procurement Officer (P-3), one Project Administrative Assistant (Local level) and 50 per cent of the cost of one Project Coordinator (P-4) to be cost-shared with the Africa Hall project at the Economic Commission for Africa. **The Advisory Committee recommends approval of the proposed positions for project management and support functions.**

34. Under section 33, Construction, alteration, improvement and major maintenance, the amount of $371,800, under consultants, comprises consultancy services ($325,000) for the detailed seismic design, the third-party proof design and an architectural consultant to develop a proposed solution for flexible workplace strategies, escalation ($13,000) and contingencies ($33,800). **In line with its recommendation in paragraph 30 above, the Advisory Committee recommends against the consultants for flexible workplace strategies, with related reductions under escalation and contingencies. The Committee recommends approval of the resources related to the other proposed consultancy services** (see para. 36 (d) below).

35. The report states that, for 2018, a lead architectural and engineering design firm and an independent risk-management firm would be required, while a construction management firm would be required from 2019 onward (see A/71/333, paras. 94 and 95). **Taking into consideration the Advisory Committee's observations and recommendations above in relation to the cost estimates for the project under option C, the Committee trusts that the Secretary-General will provide updated cost estimates for 2018 onward in his next report.**

VII. Conclusion

36. Paragraph 96 of the report sets out the recommendations of the Secretary-General on proposed actions to be taken by the General Assembly. **Subject to its recommendations and observations above, the Advisory Committee recommends that the General Assembly:**

(a) **Approve option C for the seismic mitigation retrofit and life-cycle replacements project, its proposed scope and the implementation plan, for the period from 2017 to 2023. The Committee recommends that the Assembly request the Secretary-General to provide updated cost estimates for option C in his next report** (see para. 24 above);

(b) **Approve the establishment of the dedicated project management team and project support staff;**

(c) **Approve the establishment of six temporary positions (1 P-5, 1 P-4, 2 P-3, 1 Local level based in Bangkok; 1 P-4 based at Headquarters) related to the dedicated project management team and project support staff, under section 19, Economic and social development in Asia and the Pacific, of the programme budget for the biennium 2016-2017. The P-4 position at Headquarters would be 50 per cent cost-shared with the Africa Hall project at the Economic Commission for Africa;**

(d) **Appropriate an amount of $705,800, comprising $505,600 under section 19, Economic and social development in Asia and the Pacific, and $200,200 under section 33, Construction, alteration, improvement and major maintenance, of the programme budget for 2016-2017, which would represent a charge against the contingency fund;**

(e) **Approve the establishment of a multi-year construction-in-progress account for the expenditures of the project from 2017 until project completion.**

Annex

Project cost estimates for option C

(Millions of United States dollars)

Cost		*Description*	*Phase year*	*II-III-IV 2017*	*II-III-IV 2018*	*V 2019*	*V 2020*	*V 2021*	*V 2022*	*VI 2023*	*Total*
1. Trade costs						5.057	3.890	7.509	1.828		**18.285**
1.1 Seismic mitigation measures						2.333	1.166	0.700	0.467	–	**4.666**
Urgent	ST-03	Structural deficiencies (seismic work)				2.333	1.166	0.700	0.467		4.666
		Associated cost of reinstallation of affected life-cycle elements				–	–	–	–		–
1.2 Life-cycle replacements						2.724	2.724	6.809	1.362		**13.619**
Urgent	AR-04	Marble cladding				0.645	0.323	0.194	0.129		1.290
Urgent	AR-08	Glazing and window film				1.294	0.647	0.388	0.259		2.588
Urgent	AR-06	Office space conversion				3.053	1.527	0.916	0.611		6.107
Urgent	ST-04	Roof repairs, waterproofing and replacement of insulation				0.045	0.045	0.113	0.023		0.226
Urgent	AR-09	Toilet facility upgrades, water-efficient toilets and grey water				0.049	0.049	0.122	0.024		0.245
Urgent	UT-21	Air-handling unit and air-distribution system				0.126	0.126	0.316	0.063		0.631
Urgent	UT-09	Chilled water piping reinsulation and pipe treatment/replacement				0.070	0.070	0.175	0.035		0.349
Urgent	UT-12	Electrical distribution system and bus duct				0.118	0.118	0.294	0.059		0.588
Urgent	UT-20	Lighting and controls replacement with light-emitting diodes				0.207	0.207	0.518	0.104		1.036
Urgent	UT-13	Information and communications technology network infrastructure upgrades				0.030	0.030	0.074	0.015		0.149
Urgent	UT-22	Building management system upgrade				0.036	0.036	0.090	0.018		0.179
Urgent	UT-05	Elevator shaft pressurization				0.046	0.046	0.115	0.023		0.231
1.3 Swing space costs (off-site and on-site)					2.139	1.098	1.098	1.098	1.098		**6.531**
	1.3.1	Off-site			0.999	1.098	1.098	1.098	1.098		5.391
		1.3.1.1 Rent			0.350	0.701	0.701	0.701	0.701		3.154
		1.3.1.2 Furniture			0.450						0.450
		1.3.1.3 Services			0.199	0.397	0.397	0.397	0.397		1.787

Cost		Description	Phase year	II-III-IV 2017	II-III-IV 2018	V 2019	V 2020	V 2021	V 2022	VI 2023	Total
	1.3.2	On-site			0.950	–	–	–	–		0.950
		1.3.2.1 Construction			0.800						0.800
		1.3.2.2 Furniture			0.150						0.150
	1.3.3	Standardized access control off-site			0.190	–	–	–	–		0.190
Subtotal, 1				**–**	**2.139**	**6.155**	**4.988**	**8.607**	**2.926**		**24.816**
2. Consultancies fees				0.3250	0.628	0.392	0.301	0.582	0.142		**2.370**
	2.1	Seismic design		0.1000	0.100						0.200
	2.2	Third-party proof design		0.0750	0.075						0.150
	2.3	Capital master plan flexible office space design		0.1500	0.150						0.300
	2.4	Risk-management firm			0.051	0.05	0.04	0.08	0.02		0.233
	2.5	Lead architect (5.00 per cent of cost)			0.253	0.25	0.19	0.38	0.09		1.167
	2.6	Construction management (1.75 per cent of cost)				0.09	0.07	0.13	0.03		0.320
Subtotals, 1 and 2				**0.3250**	**2.767**	**6.547**	**5.290**	**9.19**	**3.07**		**27.186**
3. Escalation				0.0130	0.226	0.817	0.899	1.99	0.81		**4.760**
Subtotals, 1-3				**0.3380**	**2.993**	**7.364**	**6.188**	**11.18**	**3.88**		**31.946**
4. Contingencies				0.0338	0.299	0.736	0.619	1.118	0.388		**3.195**
Subtotals, 1-4				**0.3718**	**3.293**	**8.100**	**6.807**	**12.30**	**4.27**		**– 35.141**
5. Project management cost				0.5056	0.696	0.696	0.916	0.916	0.916	0.232	**4.879**
Project Manager (P-5)				0.0870	0.174	0.174	0.174	0.174	0.174	0.174	1.130
Project Administrative Assistant (Local level)				0.0290	0.058	0.058	0.058	0.058	0.058	0.058	0.376
Project Engineer (P-4)				0.1489	0.149	0.149	0.149	0.149	0.149		0.893
Civil and Structural Engineer (P-3)				0.1204	0.120	0.120					0.361
Building Mechanical-Electrical-Plumbing Engineer (National Officer)							0.086	0.086	0.086		0.258
Logistics and Coordination Officer (National Officer)							0.086	0.086	0.086		0.258
Safety Project Officer, phase V (Local level)							0.058	0.058	0.058		0.174
Support											–

Cost	*Description*	*Phase year*	*II-III-IV 2017*	*II-III-IV 2018*	*V 2019*	*V 2020*	*V 2021*	*V 2022*	*VI 2023*	*Total*
Project Coordinator (P-4)[a]				0.074	0.074	0.074	0.074	0.074		0.372
Procurement Officer (P-3)			0.1204	0.120	0.120					0.361
Security Officer, swing space (2 locations, 2 positions possible) (Local level (off-site))						0.116	0.116	0.116		0.347
Information Technology Assistant, swing space (2 locations, 2 positions possible) (Local level (off-site))						0.116	0.116	0.116		0.347
Total			**0.877**	**3.988**	**8.796**	**7.724**	**13.215**	**5.187**	**0.232**	**40.019**

[a] Project Coordinator (P-4) based at Headquarters, shared with the Economic Commission for Africa at 50 per cent.